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# United States Patent [19]

Lane et al.

[11] Patent Number: 5,704,051  
[45] Date of Patent: Dec. 30, 1997

[54] HIERARCHICAL MENU BAR SYSTEM  
WITH DYNAMIC GRAPHICS AND TEXT  
WINDOWS

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10552

[21] Appl. No.: 613,527

[22] Filed: Mar. 11, 1996

## Related U.S. Application Data

[63] Continuation of Ser. No. 155,464, Nov. 19, 1993, abandoned.

[51] Int. Cl. 5 G06F 3/00

[52] U.S. Cl. 395/357; 395/353

[58] Field of Search 395/326-358,  
395/806-807; 345/146, 123-125, 902, 117-120

## [56] References Cited

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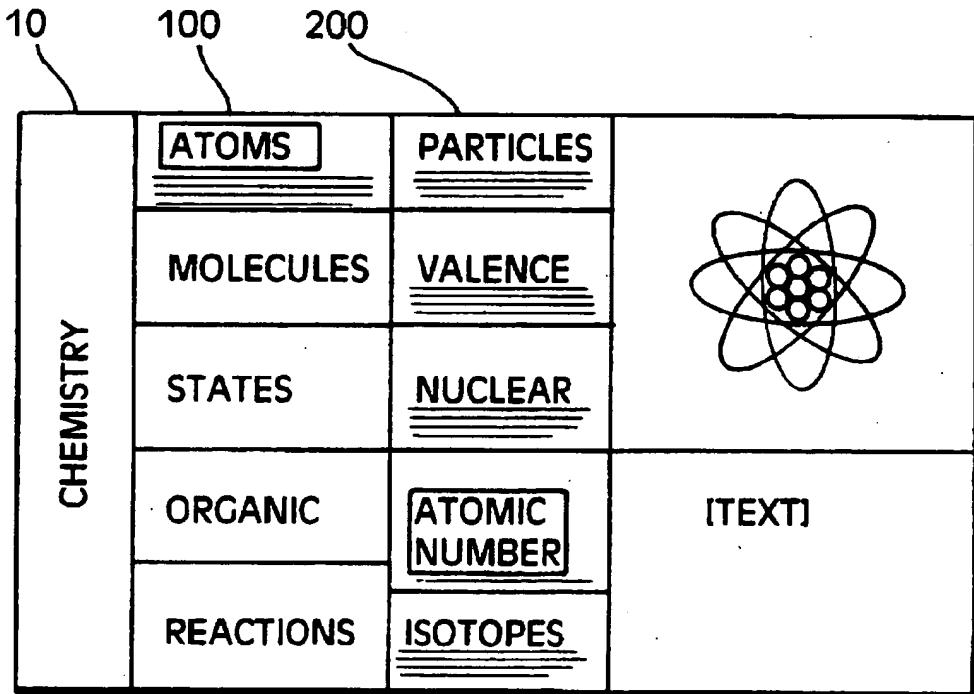
Primary Examiner—John E. Breene

## [57] ABSTRACT

A data processor for managing a multilevel application  
wherein the data processor includes a display controller that  
creates a three-level menu window and a data window. The  
menu window includes at least two levels that each incor-  
porate select commands associated with discrete subjects  
wherein menu commands are concurrently displayed on  
screen to provide historical access information. Menu com-  
mands are converted into display presentations where each  
level defines a greater degree of information detail on a  
given subject. The data display window for these presenta-  
tions is further divided into windows for text and graphics.

The foregoing arrangement has been found to be exception-  
ally effective at providing educational or tutorial information  
access in a efficient manner.

2 Claims, 3 Drawing Sheets



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# United States Patent [19]

Lane et al.

[11] Patent Number: 4,873,623

[45] Date of Patent: \* Oct. 10, 1989

[54] PROCESS CONTROL INTERFACE WITH SIMULTANEOUSLY DISPLAYED THREE LEVEL DYNAMIC MENU

[75] Inventors: Leslie A. Lane, Santa Clara; Lynn V. Lybeck, Moss Beach; David S. Perloff, Sunnyvale; Shoji Kumagi, Santa Clara, all of Calif.

[73] Assignee: Prometrix Corporation, Santa Clara, Calif.

[\*] Notice: The portion of the term of this patent subsequent to Jul. 7, 2004 has been disclaimed.

[21] Appl. No.: 50,925

[22] Filed: May 15, 1987

## Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 864,024, May 16, 1986, Pat. No. 4,805,089, which is a continuation-in-part of Ser. No. 729,153, Apr. 30, 1985, Pat. No. 4,679,137.

[51] Int. Cl. 4 ..... G06F 15/46

[52] U.S. Cl. ..... 364/188; 364/200;

340/706

[58] Field of Search ..... 364/551, 146, 188, 191, 364/192, 193, 171, 200 MS File; 340/706, 712, 707, 708, 709, 710, 711, 718

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Primary Examiner—Clark A. Jablon  
Attorney, Agent, or Firm—Flehr, Hohbach, Test, Albritton & Herbert

## [57] ABSTRACT

A system and method for computer control of machine processes. The operator of the system selects and specifies process control parameters through the use of a three level dynamic menu. The first level of the menu is used to select a group of process parameters. The second and third menus together have the visual appearance of a set of index cards, the second menu forming tabs on the index cards, and the third menu comprising the set of process parameters listed on each index card. Each process parameter has a preassigned entry status: operator unalterable, operator alterable, forced operator entry, or single time forced entry (value must be entered only once when the process is run several times). The selected process cannot be run until values have been entered for all parameters having an entry status of forced operator entry or single time forced entry. Edit field parameters limit the operator's options to a predefined set of parameter values. Edit field parameters are also used to specify complicated parameter values having a multiplicity of subparameter values. The definition of each process can include a measurement data structure which defines measurement data to be collected during the running of the process. The measurement data to be collected is specified by specifying a set of data analysis tasks, and specifying the measurement data needed for each data analysis task. The measurement data structure includes definitions of the specified data analysis tasks and the measurements to be collected.

6 Claims, 27 Drawing Sheets

REACTOR 1 - SPECIAL LOAD END

EPI		REACTOR 1 - SPECIAL		LOAD END	
		Wafer Facts		Memos & Notes	
		TITLE: _____			
		WAFER ID: _____			
		LOT ID: _____			
		PROCESS DATE ..(E)			
		PROCESS TIME ..(E)			
		OPERATOR: _____			
		PROCESS: _____			
		EQUIPMENT: _____			
		SHIFT: _____			
		STATUS 1: _____			
		STATUS 2: _____			
CARDFILE					
WAFER SETUP					
TEST SETUP					
TESTER STATUS					
TESTING STATUS					
SOCKETS					
PgUp PgDn					
Load Wafer		(T)oggle Active	(E)dit Active	New Test	Folder Select

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